New Hampshire Oral Health Data, 2002

New Hampshire Department of Health and Human Services

Office of Community and Public Health

Division of Family and Community Health

Bureau of Rural Health and Primary Care

Oral Health Program

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TABLE OF CONTENTS

Executive Summary	2
Introduction	3
New Features in This Report	
Frequently Asked Questions	5
Methods	7
Data Sources.	
Data Sources	
Data Behavioral Risk Factor Surveillance System	
Adults having teeth cleaned within the past year	11
Adults with dental visit in past year	
Adults who have lost six or more teeth	
Adults aged ≥65 years who have lost all their teeth	
Reason given by adults for no dental visit in past ye	
Adult population with dental insurance	18
Family Insurance Survey	
Population <65 without dental insurance	20
<u>Fluoridation</u>	
Cities with fluoridated public water supplies	
Population receiving fluoridated public water	24
Hospital and Community-Based Dental Programs	
Persons treated and children receiving sealants	25
School-Based Dental Programs	
Untreated decay, caries experience, and sealants-20	
Untreated decay, caries experience, and sealants-20	
Sealants applied through school-based programs-20	
Sealants applied through school-based programs-20	
Services provided by school-based programs	32
Third Grade Oral Health Survey	
Untreated decay, caries experience, and sealants	35
Cancer Registry and Vital Statistics	
New cases of oral cancer.	
Mortality from oral cancer	37
Youth Tobacco Survey	
Students receiving dental professional's advice abo	out tobacco38
National Oral Health Surveillance System	39
Conclusions	40
Contributors.	41
References	42

EXECUTIVE SUMMARY

Dental Visits – In 2001, 76% of adults in New Hampshire had visited a dentist during the past year. There were statistically significant associations between visiting a dentist and sex, age, income and education level. Females were more likely to visit the dentist than males. Persons 35-54 years of age were more likely to have seen a dentist than persons less than 35 years of age or persons 65 or more years of age. As a person's income and education increased, they became more likely to have seen a dentist in the past year.

Tooth Loss -- In 2001, 18% of New Hampshire adults had lost 6 or more teeth due to decay or gum disease. Tooth loss was strongly associated with age; 23% of persons ≥65 years of age had lost all of their teeth. There were strong associations between tooth loss and both income and education. For example, 43% of adults with less than a high school education had lost 6 or more teeth due to decay or gum disease compared to 9% of adults with a college education.

Insurance Coverage – Data on lack of dental insurance comes from two surveys, both conducted in 2001. The Family Insurance Survey found that 25% of persons less than 65 years of age in the state lacked dental insurance. The Behavioral Risk Factor Surveillance System found that 40% of adults lacked dental insurance.

Fluoridation -- There are currently 10 communities in New Hampshire that fluoridate their public water supply. Approximately 43% of New Hampshire residents served by a community water system receive fluoridated water. The *Healthy New Hampshire 2010* objective is to provide fluoridated water to 65% of state residents on a public supply system.

School-Based Dental Programs -- During the 2001-2002 school year, there were fifteen school-based dental programs in New Hampshire. A total of 7,255 2nd and 3rd grade students were screened. Among these children, 26% had untreated decay, 53% had a history of decay (i.e., either untreated or treated decay), and 40% had dental sealants.

Oral Health Status of 2nd and 3rd Grade Students -- Results of a statewide survey of 3rd grade students in 2001 indicated that 22% had untreated decay, 52% had a history of decay (i.e., either untreated or treated decay), and 46% had sealants.

Oral Cancer -- Based on data from the state cancer registry, there were 121 new cases of oral cancer in New Hampshire in 1999. Two-thirds of cases occurred in males. There were 28 deaths from oral cancer in the state in 1999. Males comprised 61% of the total. It is estimated that 75% of oral cancer is attributable to tobacco and alcohol use.

Introduction

With the release of *Oral Health in America: A Report of the Surgeon General* (1), there has been renewed interest in oral health as a public health issue. The Surgeon General's report highlighted the connection between oral health and overall health. It also documented the magnitude of the oral health problem in this country and the marked disparities in oral health among different population groups.

Shortly after release of the Surgeon General's report, the *National Oral Health Surveillance System (NOHSS)* was established (2). An objective of *Healthy People 2010* (#21-16) is to have an oral health surveillance system in every state. NOHSS is a joint effort of the Centers for Disease Control and Prevention and the Association of State and Territorial Dental Directors. The purpose of NOHSS is to monitor the burden of oral health disease, use of the oral health care delivery system, and the status of community water fluoridation. NOHSS includes eight oral health indicators: dental visits, teeth cleaning, complete tooth loss, fluoridation status, caries experience, untreated caries, dental sealants, and cancer of the oral cavity and pharynx.

This document is the second annual compilation of data on oral health from the New Hampshire Department of Health and Human Services. It is an attempt to pull together current information and to make it readily available. The focus of the report is the oral health status of adults and children in New Hampshire and their access to care including preventive services. All eight indicators from NOHSS are included in this report.

These oral health data can be used for multiple purposes: 1) to document the magnitude of the public health problem, 2) to monitor disease trends over time, 3) to detect changes in health care practices, 4) to evaluate prevention strategies, and 5) to facilitate planning. The data in this report can be used in assessing progress towards our goal of improving the oral health of the state's residents.

NEW FEATURES IN THIS REPORT

- The section on tooth loss among the elderly has been expanded.
- Data from the 2001 New Hampshire Behavioral Risk Factor Survey are presented for dental insurance coverage and reasons for lack of a dental visit in the past year.
- Sections on Frequently Asked Questions and the National Oral Health Surveillance System have been added to the report.
- Additional information on school-based dental programs is provided.

FREQUENTLY ASKED QUESTIONS

What is a sealant?

A dental sealant is a plastic material that is usually applied to the top surface of permanent molars in children. By filling in the pits and fissures of the tooth, the sealant is effective in preventing cavities. Sealants gained approval from the American Dental Association in the mid-1970's. By 1994, all states had included sealants as a benefit in their Medicaid programs.

What is water fluoridation?

Fluoridation is the controlled addition of a fluoride compound to a public water supply to bring its fluoride concentration to an optimal level to prevent cavities. Numerous studies have shown that a fluoride concentration of approximately 1 part per million in drinking water is an effective method of preventing tooth decay. Two-thirds of the US population on a public water supply currently receives fluoridated water.

What is edentulism?

Edentulism is the loss of all of a person's natural teeth. Edentulism, especially in the elderly, is often used as a measure of the oral health status of a population. Approximately one-quarter of persons 65 years or older in the United States are edentulous.

Why are data not presented by race or ethnicity?

Based on the 2000 United States Census, New Hampshire's population is approximately 96.0% white, 1.3% Asian, 0.7% African American, 0.2% American Indian, and 0.6% persons reporting some other race. About 1.7% of the population is of Hispanic or Latino origin. Because no single racial or ethnic minority group exceeds 1.7% of the total population, the number of oral health-related events in these groups is too small to allow meaningful analysis. As the state's demographics change and as data collection techniques improve, it may be possible to present data on racial and ethnic minorities in the future.

What are the Centers for Disease Control and Prevention?

The Centers for Disease Control and Prevention (CDC) are part of the United States Department of Health and Human Services. CDC is considered the nation's prevention agency; it focuses on public health measures to prevent disease, disability, and death. CDC provides funds and guidance to states for their oral health efforts.

I would like to see data for a specific town, but cannot find this information in the report. Why doesn't this report show town-level data?

New Hampshire has a relatively small population of 1.2 million people divided among 234 cities and towns. In a given year, the number of oral health-related events is too small to generate meaningful results at a town level.

Some of the information in the report is identified as "age-adjusted". What does this mean and why is it done?

To compare populations where the distribution of age groups is different, an adjustment needs to be made. For example, the rate of cancer in New Hampshire may appear higher than that of the United States. However, this may be due to New Hampshire having proportionally more older people than the United States. By age-adjusting the data using the 2000 United States standard population, the rates can be compared without concern about differences in the age distribution of the two populations.

Why are there so few oral health objectives for Healthy New Hampshire 2010?

When developing Healthy New Hampshire 2010, a decision was made to limit the total number of objectives. The two objectives specific to oral health focus on preventive measures: fluoridation and sealants. It was felt that achievement of these two objectives would have the greatest impact on the oral health status of the state's population.

Why don't school-based dental programs apply more sealants?

School-based dental programs in New Hampshire are usually run by dental hygienists. Relatively few programs have dentists who work in the schools. Hygienists cannot apply sealants unless they are under the direct supervision of a dentist. Efforts to increase the number of sealants applied in school-based programs are being made. In one program, the dental hygienist refers children in need of sealants to a dentist who visits the school. If the dentist agrees on the need for sealants, the dental hygienist applies them in the school.

METHODS

Data from surveys are presented with 95% confidence intervals. Because the data were collected from a sample of the population, each estimate has a margin of error. The confidence interval reflects the degree of uncertainty for each estimate. For example in Table 1, 77.6% of respondents reported having their teeth cleaned in the past year with a 95% confidence interval of 76.0% - 79.2%. This can be interpreted to mean that our best estimate is that 77.6% of adults in New Hampshire had their teeth cleaned during the previous 12 months, but the true value could actually be as low as 76.0% or as high as 79.2%. In other words, the estimate from the survey has a margin of error of +/- 1.6%.

Where appropriate, oral health-related objectives from *Healthy People 2010* or *Healthy New Hampshire 2010* are given to put current data from New Hampshire in perspective. *Healthy People 2010* is a set of national health targets for the next decade (3). *Healthy New Hampshire 2010* is a set of state-specific health targets (4).

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a population-based. random-digit dialed telephone survey of civilian, non-institutionalized adults, aged 18 years and older. The survey is coordinated by the Centers for Disease Control and Prevention (CDC) and is conducted annually by all states. In New Hampshire, the Bureau of Health Statistics and Data Management is responsible for the survey. The BRFSS includes questions on health behavior risk factors such as seat belt use, diet, weight control, oral health, diabetes, alcohol use, physical exercise, and preventive health The data are weighted to more accurately reflect the population by accounting for age, gender, geographic location, and probability of selection. A core set of questions, including those related to oral health, is asked every three years. Additional questions on oral health can be asked annually in an optional module. Hampshire, 4,068 interviews were completed in 2001. The national estimates provided are calculated by pooling all BRFSS data as a sample of the nation as a whole. New Hampshire and national data can be accessed on line at: http://www.cdc.gov/brfss/ Additional information on the New Hampshire BRFSS is available on-line at: http://www.dhhs.state.nh.us/DHHS/BHSDM/Behavioral-Risk-Data.htm or by calling (603) 271-5926.

Family Insurance Survey

This survey was conducted by the Office of Health Planning and Medicaid in the New Hampshire Department of Health and Human Services in 2001-2002 with funding from the Health Resource and Service Administration. The survey was conducted by telephone. A total of 5,177 families were interviewed. Data was obtained for persons less than 65 years of age. Additional information is available on-line at: http://www.dhhs.state.nh.us/DHHS/HPR/LIBRARY/Program+Report/2002+Surveys.htm

Healthy New Hampshire 2010

Healthy New Hampshire 2010 is New Hampshire's health promotion and disease prevention agenda for the first decade of the 21st century. Similar to Healthy People 2010, it is a compilation of health objectives for the next decade. A copy of Healthy New Hampshire 2010 can be obtained on-line at: http://www.healthynh2010.org/

Healthy People 2010

Healthy People 2010 is a set of national health targets for the next decade. It builds on initiatives pursued over the past two decades including the 1979 Surgeon General's Report, Healthy People, and Healthy People 2000: National Health Promotion and Disease Prevention Objectives. It is designed to achieve two overarching goals: 1) increase quality and years of healthy life; and 2) eliminate health disparities. A copy of Healthy People 2010 can be obtained on-line at: http://www.health.gov/healthypeople/.

Hospital and Community-Based Dental Programs

In 2002, there were five hospital- or community-based dental programs in New Hampshire. These programs see dental patients who would otherwise have no access to dental care. Both restorative and preventive services are provided in these programs.

School-based dental programs

As of 2002, there were 15 school-based dental programs in New Hampshire. Many of the individual programs cover schools in several towns. Approximately 23% (7,255/31,339) of students in 2nd and 3rd grades in public schools in New Hampshire were screened in school-based dental programs during the 2001-2002 academic year. Programs receive funding from a variety of sources: local charities, the state oral health program, hospitals, and local government. Most programs focus their efforts on children who have no usual source of dental care. Preventive services, such as good oral hygiene, proper nutrition, fluoride and sealants, are emphasized in most programs.

State Cancer Registry Data

Statistical information on newly diagnosed primary cancers is reported to the New Hampshire State Cancer Registry. This database is comprised of information on reportable cancers from New Hampshire acute care hospitals and their tumor registries. medical records departments, oncology departments, physicians, and private pathology laboratories. The Registry has agreements for exchange of case information with the states of Massachusetts, Maine, Vermont, Rhode Island, Connecticut, New York, and Florida. The New Hampshire State Cancer Registry is operated by the Norris Cotton Cancer Center under a contract between the State and Dartmouth Medical School. The Bureau of Health Statistics and Data Management in the New Hampshire Department of Health and Human Services analyzes the records of newly diagnosed cases of cancer (incidence data) collected by the New Hampshire State Cancer Registry. Information from the 1999 state cancer report is available on-line http://www.dhhs.state.nh.us/DHHS/BHSDM/LIBRARY/Data-Statistical+Report/Cancer-Incidence-Mortality-1998.htm

Third Grade Oral Health Survey

The survey was conducted from February-April, 2001. The survey design was adopted from a standard protocol from the *Basic Screening Surveys* (8). The survey sample was selected using *PCSample* software which utilizes probability proportional to size sampling. The sample consisted of 27 schools with 507 students enrolled in selected classrooms. Twenty-six (96.3%) schools participated in the survey and 410 (80.9%) students were examined. The overall participation rate was 77.9%. A report on the survey was published in the MMWR on March 29, 2002 (volume 51, number 12, pages 259-260) (9). An electronic copy of the report is available at:

Vital Statistics

New Hampshire law requires that reports of all birth, death, fetal death, marriage, and divorce be filed with the office of the State Registrar at the New Hampshire Department of Health and Human Services, Bureau of Vital Records. The Bureau of Health Statistics and Data Management maintains and analyzes these data. Depending on the event, filings are made by hospital personnel, physicians, funeral directors, city/town clerks, attorneys, and clerks of the courts. Reports of New Hampshire resident births and deaths in other states, and Canada, are provided to the State Registrar, for statistical purposes only, under an inter-state/Canadian agreement for the exchange of vital events information. The 1998 New Hampshire Vital Statistics Report may be accessed on-line at: http://www.dhhs.state.nh.us/dhhs/bhsdm/library/default.htm

For death certificates, the cause of death reported is the underlying cause of death. In a death record, the underlying cause of death is the specific disease, condition, or injury that initiated the chain of events leading to death. The underlying cause of death is not always the same as the immediate cause of death. For example, if a person was hospitalized for oral cancer, but developed pneumonia and died while in the hospital, the underlying cause of death would be oral cancer. Additional information on deaths in New Hampshire is available at: http://www.dhhs.state.nh.us/DHHS/BHSDM/Death+Data.htm

Water Fluoridation Reporting System

The Water Fluoridation Reporting System (WFRS) is maintained by the Centers for Disease Control and Prevention, the New Hampshire Department of Health and Human Services, and the New Hampshire Department of Environmental Services. The data were last updated in 2001. The system contains fluoridation information for each public water system in the state. Additional information is available on-line at: http://apps.nccd.cdc.gov/mwf/index.asp and at http://gis.cdc.gov/doh/default.asp

Youth Tobacco Survey

During October and November of 2001 the New Hampshire Youth Tobacco Survey (NHYTS) was conducted in public middle and high schools. Middle school was defined as grades six through eight and high school as grades nine through twelve. A two-stage cluster sample design was used to produce a representative sample of students. In the first stage, 50 middle schools and 50 high schools were randomly selected. In the second stage, classes were randomly selected from within the participating schools. All students in the selected classes were eligible to participate. The 2001 NHYTS used a pencil and paper questionnaire consisting of 81 multiple-choice-questions. Students completed a self-administered questionnaire in the classroom, recording their answers on an answer sheet. Results were obtained anonymously and the overall response rate was 73% for middle schools and 63% for high schools. Results of the 2001 survey are available online at http://www.dhhs.state.nh.us/DHHS/TPCP/LIBRARY/default.htm

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Table 1. Adults who reported having their teeth cleaned by a dentist or dental hygienist within the past year – New Hampshire, 2001

	Percent	95% Confidence Interval
All	77.6	76.0-79.2
Male	73.8	71.2-76.3
Female	81.3	79.4-83.2
18-24 years	68.7	62.3-75.0
25-34 years	70.8	66.8-74.7
35-44 years	80.2	77.5-83.0
45-54 years	83.6	80.7-86.6
55-64 years	82.8	79.0-86.5
65+ years	79.2	75.5-82.9
<\$15,000	52.2	43.4-61.0
\$15,000-24,999	57.0	51.2-62.8
\$25,000-34,999	69.6	64.6-74.6
\$35,000-49,999	78.3	74.5-82.1
\$50,000+	85.7	83.6-87.8
<12 years of education	55.7	47.5-63.8
12 years of education	72.0	68.9-75.1
13-15 years of education	78.7	75.7-81.7
16+ years of education	85.1	82.9-87.3

Comment: There were statistically significant associations between teeth cleaning and sex, age, income, and education level. Women were more likely to report having had their teeth cleaned in the past year than were men. Persons 35 years of age and older were more likely to have had their teeth cleaned than were persons less than 35 years of age. Those with the higher incomes were more likely to have had an annual cleaning than those with lower incomes. College graduates were more likely to have had their teeth cleaned during the past year than were persons with less education.

Seventy-eight percent of adults in New Hampshire reported having had their teeth cleaned in the past year which compares favorably to the national estimate of 69% from 1999. Connecticut reported the highest percentage of people who had a teeth cleaning within the past year (80%); Nevada had the lowest percentage (56%) in 1999.

Method: People who had never visited a dentist or dental clinic and those who had lost all of their teeth were not asked this question. Data analysis excluded persons who responded "Don't Know/Not Sure" or "Refused" to this question.

Healthy People 2010: Objective #21-10 is to increase the proportion of children and adults who use the oral health care system each year to 56%. This objective uses data from the Medical Expenditure Panel Survey which is not comparable to data from the Behavioral Risk Factor Surveillance System.

Healthy New Hampshire 2010: No objective.

Table 2. Adults who reported visiting a dentist or dental clinic within the past year for any reason – New Hampshire, 2001

	Percent	95% Confidence Interval
All	76.4	74.9-78.0
Male	73.3	70.9-75.8
Female	79.3	77.4-81.2
18-24 years	69.8	63.6-76.1
25-34 years	75.1	71.4-78.8
35-44 years	81.6	78.9-84.3
45-54 years	81.8	78.8-84.8
55-64 years	77.1	73.2-81.0
65+ years	69.1	65.2-72.9
<\$15,000	46.7	39.3-54.2
\$15,000-24,999	56.8	51.5-62.0
\$25,000-34,999	70.7	66.0-75.4
\$35,000-49,999	77.1	73.3-80.9
\$50,000+	86.2	84.2-88.3
<12 years of education	50.1	43.4-56.8
12 years of education	70.4	67.5-73.4
13-15 years of education	78.7	75.7-81.6
16+ years of education	85.8	83.6-87.9

Comment: There were statistically significant associations between visiting a dentist and sex, age, income, and education. Females were more likely to have visited a dentist in the past year than males. Persons 35-54 years of age were more likely to have visited a dentist than persons less than 35 years of age or persons 65 or more years of age. As a person's income increased they were more likely to have seen a dentist in the past year. Increasing educational attainment was also associated with having seen a dentist during the past year.

Seventy-six percent of adults in New Hampshire reported visiting a dentist or dental clinic in the past year which compares favorably to the national estimate of 68% from 1999. Connecticut reported the highest percentage of people who had visited a dentist within the past year (78%); West Virginia had the lowest percentage (56%) in 1999.

Method: This question was asked of all survey participants. Data analysis excluded persons who responded "Don't Know/Not Sure" or "Refused" to this question.

Healthy People 2010: (Objective #21-10) Increase the proportion of children and adults who use the oral health care system each year to 56%. National data for this objective

were obtained from the Medical Expenditure Panel Survey and therefore cannot be compared directly to results from the Behavioral Risk Factor Surveillance System.

Healthy New Hampshire 2010: No objective.

Table 3. Adults who have lost 6 or more teeth due to decay or gum disease – New Hampshire, 2001

	Percent	95% Confidence Interval
All	17.9	16.6-19.2
Male	16.8	14.9-18.7
Female	18.9	17.1-20.7
18-24 years	2.9	0.8-4.9
25-34 years	4.0	2.3-5.8
35-44 years	7.8	5.8-9.7
45-54 years	17.4	14.5-20.3
55-64 years	34.9	30.5-39.4
3		
65+ years	48.8	44.6-53.0
<\$15,000	46.5	39.1-53.9
\$15,000-24,999	31.9	27.3-36.5
\$25,000-34,999	22.4	18.2-26.6
\$35,000-49,999	17.2	13.9-20.4
\$50,000+	9.0	7.5-10.5
<12 years of education	43.1	36.6-49.7
12 years of education	23.6	20.9-26.3
13-15 years of education	16.0	13.6-18.4
16+ years of education	8.6	7.1-10.2

Comment: There were strong associations between tooth loss and age, income, and education. Tooth loss, especially edentulism (i.e., loss of all teeth), can reduce quality of life, self-image, and daily functioning; it is preventable with good oral hygiene, fluoridated water, and regular dental care. Patient and provider attitudes towards tooth retention also play an important role.

Method: This question was asked of all survey participants. Data analysis excluded persons responding "Don't Know/Not Sure" or "Refused" to this question.

Healthy People 2010: The *Healthy People 2010* objective is to increase the proportion of adults aged 35 to 44 years who have never had a permanent tooth extracted because of dental caries or periodontal disease to 42% (#21-3). In 2001 in New Hampshire, 61% of persons 35 to 44 years of age had never lost a permanent tooth due to decay or gum disease.

Healthy New Hampshire 2010: No objective.

Table 4. Adults aged 65 years and older who have lost all of their natural teeth due to decay or gum disease – New Hampshire, 2001

	Percent	95% Confidence Interval
All	22.8	19.3-26.3
Male	16.7	11.7-21.6
Female	27.2	22.3-32.1
<\$15,000	45.7	34.9-56.6
\$15,000-24,999	32.5	23.2-41.7
\$25,000-34,999	17.8	10.3-25.4
\$35,000-49,999	7.0	0.9-13.0
\$50,000+	*	*
<12 years of education	51.4	40.7-62.2
12 years of education	30.4	23.5-37.3
13-15 years of education	14.6	8.7-20.5
16+ years of education	5.7	2.1-9.3

^{*} The number of respondents (n=4) in this income category was too small to calculate a reliable estimate.

Comment: There were strong associations between complete tooth loss (i.e., edentulism) and sex, income and educational attainment. Edentulism can reduce quality of life, self-image, and daily functioning; it is preventable with good oral hygiene, fluoridated water, and regular dental care. Patient and provider attitudes towards tooth retention also play an important role.

Method: This question was asked of all survey participants. Data analysis excluded persons responding "Don't Know/Not Sure" or "Refused" to this question and was restricted to person >65 years of age.

Healthy People 2010: The *Healthy People 2010* objective is to reduce the proportion of adults 65 to 74 years of age who have had all their natural teeth extracted to 20% (#21-4). For New Hampshire in 2001 22% of persons 65 to 74 years of age had lost all their teeth.

Healthy New Hampshire 2010: No objective.

Table 5. Main reason given by adults for not having visited a dentist in the past year – New Hampshire, 2001

	Percent	95% Confidence Interval
No reason to go (no problems, no teeth)	32.7	29.2-36.2
Cost	27.9	24.3-31.5
Fear, apprehension, nervousness, dislike going	7.4	5.5-9.3
Other priorities	5.8	4.0-7.6
Have not thought of it	4.5	2.8-6.2
Do not have/know a dentist	4.0	2.6-5.5
Cannot get to office/clinic	2.3	1.3-3.3
Other	15.4	12.5-18.2

Comment: The most common reason for having not visited a dentist in the past year, "no reason to go", was given more commonly as people grew older (13.6% among persons 18-24 years of age versus 70.1% among person 65 years of age and older). There were also significant associations for "no reason to go" with both income and educational attainment. Persons with higher incomes and more education were less likely to report "no reason to go" than persons with lower incomes and less education. The second most common reason "cost" was given less commonly as people grew older (48.6% among person 18-24 years of age versus 10.6% among persons 65 years of age and older).

Method: People who reported visiting a dentist or dental clinic in the past year and people who reported having their teeth cleaned in the past year were not asked this question. Data analysis excluded persons responding "Don't Know/Not Sure" and "Refused" to this question. The data are based on a sample size of 879.

Healthy People 2010: No objective.

Healthy New Hampshire 2010: No objective.

Table 6. Dental insurance coverage among adults – New Hampshire, 2001

	Percent	95% Confidence Interval
All	60.3	58.6-62.0
Male	62.4	59.8-64.9
Female	58.4	56.1-60.7
18-24 years	59.4	52.9-65.9
25-34 years	68.7	64.9-72.5
35-44 years	71.7	68.6-74.8
45-54 years	72.7	69.4-76.1
55-64 years	58.5	54.0-63.0
65+ years	21.9	18.5-25.3
<\$15,000	24.4	17.3-31.5
\$15,000-24,999	38.8	33.5-44.0
\$25,000-34,999	49.9	44.8-55.0
\$35,000-49,999	58.6	54.2-62.9
\$50,000+	76.6	74.2-78.9
<12 years of education	44.6	37.7-51.4
12 years of education	54.9	51.7-58.2
13-15 years of education	61.6	58.2-65.0
16+ years of education	67.6	64.9-70.2

Comment: Insurance coverage was highest among persons 25-54 years of age and was lower among young adults (18-24 years of age) and older adults (55 years of age and older). Insurance coverage was also strongly associated with both income and educational attainment. Persons with higher incomes and more education were more likely to report dental insurance coverage.

The percentage of adults without insurance from this survey (40%) was substantially different than that reported from the Family Insurance Survey (25%) (Table 7). The reason for this difference is, in part, due to the age groups included in the two surveys. The Behavioral Risk Factor Surveillance System included adults \geq 18 years of age whereas the Family Insurance Survey included all person <65 years of age.

Method: This question was asked of all survey participants. Data analysis excluded those responding "Don't Know/Not Sure" or "Refused" to this question.

Healthy People 2010: There is no objective specific to dental insurance, however, there is an objective (#1-1) to increase the proportion of persons with health insurance to 100%.

Healthy New Hampshire 2010: There is no objective specific to dental insurance, however, there is an objective to increase the percentage of persons age 65 and under who have health insurance to 100%.

Table 7. Population under 65 years of age without dental insurance -- New Hampshire, 2001

	Percentage	95% Confidence
		Interval
New Hampshire		
Adults (>18 years of age)	25	24-26
Children (≤18 years of age)	22	20-24
County		
Belknap		
Adults	31	24-38
Children	24	13-34
Carroll		
Adults	40	33-48
Children	35	24-46
Cheshire		
Adults	26	20-32
Children	22	14-30
Coos		
Adults	26	17-35
Children	17	6-28
Grafton		
Adults	26	21-31
Children	24	16-32
Hillsborough		
Adults	25	22-27
Children	23	19-27
Merrimack		
Adults	28	24-33
Children	27	19-35
Rockingham		
Adults	22	20-25
Children	21	17-25
Strafford		
Adults	19	15-24
Children	15	9-21
Sullivan		
Adults	27	20-34
Children	20	10-29

Comment: From this survey, approximately one-quarter of New Hampshire residents under 65 years of age lack dental insurance. Lack of coverage varies from a low of 19% among adults and 15% among children in Strafford County to a high of 40% among adults and 35% among children in Carroll County.

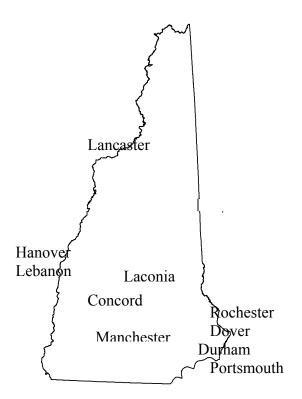
Method: The survey collected information on all residents under age 65 in selected households. Information was provided by an adult respondent in each household.

Healthy People 2010: There is no objective specific to dental insurance, however, there is an objective (#1-1) to increase the proportion of persons with health insurance to 100%.

Healthy New Hampshire 2010: There is no objective specific to dental insurance, however, there is an objective to increase the percentage of persons age 65 and under who have health insurance to 100%.

Data Source: New Hampshire Department of Health and Human Services, Office of Health Planning and Medicaid.

Table 8. Cities with Fluoridated Public Water Supplies -- New Hampshire, 2002



Comment: Some residents of the following towns receive water from a neighboring community with a fluoridated water supply: Conway (from Fryeburg, Maine); Bow (from Concord); Rollinsford (from Dover); Lee (from Durham); Belmont and Gilford (from Laconia); Auburn, Bedford, Derry, Goffstown, Hooksett, and Londonderry (from Manchester), and Greenland, New Castle, Newington, and Rye (from Portsmouth).

Naturally occurring fluoride has been documented in water from many areas of New Hampshire. Because of variations in fluoride levels, individual wells should be tested to determine their fluoride content.

Method: Data on fluoridated community water systems is maintained by the Department of Environmental Services and the Department of Health and Human Services using the Water Fluoridation Reporting System (WFRS).

Healthy People 2010: Objective #21-9 is to increase the proportion of the U.S. population served by community water systems with optimally fluoridated water to 75%.

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to have 65% of the population served by community water systems with optimally fluoridated water. In New Hampshire in 2001, 43% of persons served by community water systems were receiving fluoridated water.

Data Source: New Hampshire Department of Environmental Services (5) and New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program.

Table 9. Population Receiving Fluoridated Public Water – New Hampshire, 2001 and United States, 2000

	A Population	B Population on public water supply system (B/A)	C Population on public water supply system receiving fluoride (C/B)
New Hampshire	1,235,786	807,438 (65%)	347,007 (43%)
United States	281,421,906	246,120,616 (87%)	162,067,341 (66%)

Comment: New Hampshire has a smaller percentage of its population on a public water supply (65%) than does the United States (87%). New Hampshire also has a smaller percentage of its population on a public water supply who receive fluoridated water (43%) than does the United States (66%) (6).

Method: New Hampshire data on fluoridated community water systems is maintained by the Department of Environmental Services and the Department of Health and Human Services using the Water Fluoridation Reporting System (WFRS).

Healthy People 2010: The *Healthy People 2010* objective (#21-9) for the United States is to have 75% of the population served by community water systems with optimally fluoridated water. The percentage in 2000 was 66% ranging from a high of 100% in the District of Columbia to a low of 2% in Utah (6).

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to have 65% of the population served by community water systems with optimally fluoridated water. In New Hampshire in 2001, 43% of persons served by community water systems were receiving fluoridated water.

Data Source: New Hampshire Department of Environmental Services (7); New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program; Centers for Disease Control and Prevention; and United States Census.

HOSPITAL AND COMMUNITY-BASED DENTAL PROGRAMS

Table 10. Number of persons treated and children receiving sealants in hospitaland community-based dental programs – New Hampshire, 2000-2001

Program	# Treated	# Children Receiving Sealants
Ammonoosuc Community Health		
Services (Littleton)	80	0
Avis Goodwin Community Health Center (Rochester)	45	2
Capital Region Family Health Center (Concord)	893 *	75
Lakes Region General Hospital / Dental Resource Center (Laconia)	1328	131
Manchester Dental Alliance		
(Manchester)	2488	50 **
,		
Total	4834	258

^{*} Data from 10/00 through 9/01.

Comment: These programs provide services to persons who would otherwise not have access to dental care.

Method: Information is reported by each program to the state's oral health program on an annual basis.

Healthy People 2010: Objective #21-8a is to increase the proportion of children aged 8 years who have received dental sealants on their molar teeth to 50% (#21-8a).

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to increase the proportion of children in third grade who have received dental sealants on their permanent molar teeth. The specific target has not yet been established. In 2001 46% of children in third grade in New Hampshire had dental sealants.

Data Source: New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program.

^{**} Estimate based on number of sealants applied (n=200).

SCHOOL-BASED DENTAL PROGRAMS

Table 11. Number of 2^{nd} and 3^{rd} grade students screened in school-based programs and percent with untreated decay, caries experience, and sealants – New Hampshire, 2000-2001

Site	# Students	# Screened / # Students (%)	# Untreated Decay / # Screened (%)	# History of Decay / # Screened (%)	# Sealants / # Screened (%)
Alexander Eastman	2760	1441/2760 (52%)	185/1441 (13%)	457/1441 (32%)	579/1441 (40%)
Cheshire Smiles	1249	680/1249 (54%)	225/680 (33%)	356/680 (52%)	306/680 (45%)
Coos County Family Health Svc	370	241/370 (65%)	71/241 (29%)	152/241 (63%)	133/241 (55%)
Dental Resource Center	877	396/877 (45%)	97/396 (24%)	189/396 (48%)	155/396 (39%)
Frisbee Memorial Hospital	1269	653/1269 (51%)	330/653 (51%)	430/653 (66%)	294/653 (45%)
Health First Family Care Ctr (third grade only)	420	270/420 (64%)	57/420 (14%)	148/420 (35%)	49/420 (12%)
Lamprey Health Care	524	296/524 (56%)	79/296 (27%)	163/296 (55%)	149/296 (50%)
Manchester	2034	1893/2034 (93%)	464/1893 (25%)	966/1893 (51%)	573/1893 (30%)
Milford	394	50/394 (13%)	16/50 (32%)	18/50 (36%)	22/50 (44%)
Rock Dental Clinic	530	290/530 (55%)	57/290 (20%)	169/290 (58%)	130/290 (45%)
Seacoast Healthy Grins	351	183/351 (52%)	55/183 (30%)	106/183 (58%)	125/183 (68%)
Speare Memorial Hospital	215	151/215 (70%)	54/151 (36%)	115/151 (76%)	28/151 (19%)
Stratford's Shining Smiles	30	22/30 (73%)	11/22 (50%)	12/22 (55%)	6/22 (27%)
Total	11023	6566/11023 (60%)	1701/6566 (26%)	3281/6566 (50%)	2549/6566 (39%)

Comment: Because these results represent only students participating in school-based programs, the data are not representative of all 2nd and 3rd graders in New Hampshire.

Method: Data are reported by each school-based program to the state's oral health program at the end of the academic year.

Healthy People 2010: The *Healthy People 2010* objectives are to reduce the proportion of 6 to 8 year old children with dental caries experience to 42% (#21-1b), to reduce the proportion of 6 to 8 year old children with untreated dental decay to 21% (#21-2b), and to increase the proportion of children aged 8 years who have received dental sealants on their molar teeth to 50% (#21-8a).

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to increase the proportion of children in third grade who have received dental sealants on their permanent molar teeth. The specific target has not yet been established. In 2001 46% of children in third grade in New Hampshire had dental sealants.

Data Source: New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program; Manchester Health Department

Table 12. Number of 2^{nd} and 3^{rd} grade students screened in school-based programs and percent with untreated decay, caries experience, and sealants – New Hampshire, 2001-2002

Site	# Students	# Screened / # Students (%)	# Untreated Decay / # Screened (%)	# History of Decay / # Screened (%)	# Sealants / # Screened (%)
Alexander Eastman	2488	1327/2488 (53%)	183/1327 (14%)	499/1327 (38%)	576/1327 (43%)
Cheshire Smiles	1136	646/1136 (57%)	179/646 (28%)	332/646 (51%)	381/646 (59%)
Claremont	267	186/267 (70%)	85/186 (46%)	157/186 (84%)	26/186 (14%)
Coos County Family Health Svc	162	94/162 (58%)	24/94 (26%)	51/94 (54%)	46/94 (49%)
Dental Resource Center	809	355/809 (44%)	110/355 (31%)	166/355 (47%)	130/355 (37%)
Frisbee Memorial Hospital	1474	752/1474 (51%)	352/752 (47%)	474/752 (63%)	377/752 (50%)
Health First Family Care Ctr	731	262/731 (36%)	55/262 (21%)	141/262 (54%)	67/262 (26%)
Lamprey Health Care	513	273/513 (53%)	83/273 (30%)	143/273 (52%)	143/273 (52%)
Manchester	1961	1850/1961 (94%)	467/1850 (25%)	1020/1850 (55%)	501/1850 (27%)
Milford	342	342/342 (100%)	41/342 (12%)	168/342 (49%)	182/342 (53%)
Rock Dental Clinic	612	321/612 (52%)	78/321 (24%)	172/321 (54%)	125/321 (39%)
School Smiles	673	232/673 (34%)	50/232 (22%)	104/232 (45%)	61/232 (26%)
Seacoast Healthy Grins	326	185/326 (57%)	61/185 (33%)	121/185 (65%)	153/185 (83%)
Speare Memorial Hospital	433	360/433 (83%)	116/360 (32%)	260/360 (72%)	84/360 (23%)
Stratford's Shining Smiles	145	70/145 (48%)	29/70 (41%)	42/70 (60%)	43/70 (61%)
Total	12072	7255/12072	1913/7255	3850/7255	2895/7255

(60%) (26%) (53%) (40%)

Comment: Because these results represent only students participating in school-based programs, the data are not representative of all 2^{nd} and 3^{rd} graders in New Hampshire.

Method: Data are reported to the state's oral health program by each school-based dental program at the end of the academic year.

Healthy People 2010: The *Healthy People 2010* objectives are to reduce the proportion of 6 to 8 year old children with dental caries experience to 42% (#21-1b), to reduce the proportion of 6 to 8 year old children with untreated dental decay to 21% (#21-2b), and to increase the proportion of children aged 8 years who have received dental sealants on their molar teeth to 50% (#21-8a).

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to increase the proportion of children in third grade who have received dental sealants on their permanent molar teeth. The specific target has not yet been established. In 2001 46% of children in third grade in New Hampshire had dental sealants.

Data Source: New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program; Manchester Health Department.

Table 13. Sealants applied through school-based dental programs -- New Hampshire, 2000-2001

Site	Number of children receiving sealants
Cheshire Smiles	158
Dental Resource Center	50
Milford	46
Total	254

Comment: Three (21%) of 14 school-based programs offered sealants to students. The Dental Resource Center and Milford applied sealants in the schools. Cheshire Smiles arranged to have students transported to local dental offices for sealant placement on selected days.

Method: Data are reported to the state's oral health program by each school-based dental program at the end of the academic year.

Healthy People 2010: The *Healthy People 2010* objective is to increase the proportion of children aged 8 years who have received dental sealants on their molar teeth to 50% (#21-8a).

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to increase the proportion of children in third grade who have received dental sealants on their permanent molar teeth. The specific target has not yet been established. In 2001 46% of children in third grade in New Hampshire had dental sealants.

Data Source: New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program

Table 14. Sealants applied through school-based dental programs -- New Hampshire, 2001-2002

Site	Number of children receiving sealants	
Cheshire Smiles	106	
Dental Resource Center	26	
Manchester	3	
Milford	61	
Stratford's Shining Smiles	5	
Total	201	

Comment: Five (33%) of 15 school-based programs offered sealants to students. The Dental Resource Center, Manchester, and Milford applied sealants in the schools. Cheshire Smiles arranged to have students transported to local dental offices for sealant placement on selected days. Stratford arranged for sealant placement at local dental offices.

Method: Data are reported to the state's oral health program by each school-based dental program at the end of the academic year.

Healthy People 2010: The *Healthy People 2010* objective is to increase the proportion of children aged 8 years who have received dental sealants on their molar teeth to 50% (#21-8a).

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to increase the proportion of children in third grade who have received dental sealants on their permanent molar teeth. The specific target has not yet been established. In 2001 46% of children in third grade in New Hampshire had dental sealants.

Data Source: New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program; Manchester Health Department.

Table 15. Services Provided By School-based Programs – New Hampshire, 2001-2002

		Number of
		Programs
Grades served:	Kindergarten	10
Grades served.	1 st -3 rd grades	15
	4 th grade	11
	5 th grade	10
	6 th grade	5
	7-8 th grades	4
	9-12 th grades	2
	8	
Number of dent	ists per program providing restorative	Median: 3
treatment for ch	ildren referred from school program	Range: 0-14
Programs with a	lentists providing restorative treatment	
_	erred from school program who:	
Tot children tere	Donated their services	6
	Accepted Medicaid	6 9
	Accepted discounted payments	
	Required 100% of regular fees	7 8
	Required 10070 of regular rees	0
School program	s that bill Medicaid for:	
	Preventive services provided in school	7
	Restorative services provided outside school	3
Screening:		
<i>8</i> .	Offered to all students in eligible grades	15
	Screening done by hygienist	14
	Screening done by dentist	3
	Screening done with mirror	7
	Screening done after active consent (e.g.,	11
	signed consent from parent returned to school)	11
Prophylaxis:		
i iopiiyiaxis.	Teeth cleaning offered to all students	4
	Teeth cleaning offered only to high risk	4
	students	12
	Teeth cleaning includes scaling	12
	Tooth polishing done with powered handpiece	13
	room ponsining done with powered nandpiece	12
Sealants:		
	Applied in schools	4
	Applied in organized program outside school	5

Fluoride products used: Foam 10 Gel 6 Mouth rinse 9 Varnish 2 Toothpaste 12 Fluoridated water: Program serves schools in fluoridated towns 4 Health Education: Individual instruction on brushing 14 Individual instruction on flossing 14 Individual instruction on regular dental 13 visits Individual instruction on limiting sweets 13 Individual instruction on limiting sweets 13 Individual instruction on regular dental 4 and tobacco Group instruction on flossing 14 Group instruction on regular dental visits 14 Group instruction on regular dental visits 14 Group instruction on limiting sweets 13 Group instruction on avoiding alcohol and tobacco 14 Group instruction on regular dental visits 14 Group instruction on limiting sweets 14 Group instruction on avoiding alcohol and tobacco 14 Referrals: Program arranges for children 12 to see local provider 12 Program provides financial support 7 for children to see local providers Program Oversight: Local dentist works in school with 4 hygienist at least part of time Community group oversees program 8			Number of Programs
Foam Gel Mouth rinse Varnish Toothpaste Fluoridated water: Program serves schools in fluoridated towns Individual instruction on brushing Individual instruction on flossing Individual instruction on regular dental Visits Individual instruction on limiting sweets Individual instruction on limiting sweets Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on regular dental visits Group instruction on limiting sweets Individual instruction on brushing Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on regular dental visits Group instruction on limiting sweets Individual instruction on regular dental visits Individual instruction on avoiding alcohol and tobacco Frogram instruction on regular dental visits Group instruction on limiting sweets Individual instruction on regular dental visits Individual instruction on regular dental visits Individual instruction on regular dental visits Individual instruction on avoiding alcohol and tobacco Frogram instruction on regular dental visits Individual instruction on regular dental Individual instruction on avoiding alcohol Individual instruction on avoiding alcoh	Fluoride products u	ised:	
Mouth rinse Varnish Toothpaste Program serves schools in fluoridated towns Health Education: Individual instruction on brushing Individual instruction on flossing Individual instruction on regular dental Visits Individual instruction on limiting sweets Individual instruction on avoiding alcohol and tobacco Group instruction on flossing Group instruction on flossing Individual instruction on segular dental Individual instruction on avoiding alcohol and tobacco Individual instruction on brushing Group instruction on flossing Individual instruction on brushing Individual instruction on avoiding alcohol Individual instru	1		10
Varnish Toothpaste 12 Fluoridated water: Program serves schools in fluoridated towns 4 Health Education: Individual instruction on brushing 14 Individual instruction on flossing 14 Individual instruction on regular dental 13 visits Individual instruction on limiting sweets 13 Individual instruction on avoiding alcohol 4 and tobacco Group instruction on flossing 13 Group instruction on regular dental visits 14 Group instruction on regular dental visits 14 Group instruction on limiting sweets 14 Group instruction on limiting sweets 14 Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children 12 to see local provider Program provides financial support 7 for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time		Gel	6
Fluoridated water: Program serves schools in fluoridated towns 4 Health Education: Individual instruction on brushing 14 Individual instruction on flossing 14 Individual instruction on regular dental 13 visits Individual instruction on limiting sweets 13 Individual instruction on avoiding alcohol 4 and tobacco Group instruction on flossing 13 Group instruction on flossing 13 Group instruction on regular dental visits 14 Group instruction on regular dental visits 14 Group instruction on limiting sweets 14 Group instruction on limiting sweets 14 Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children 12 to see local provider Program provides financial support 7 for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time		Mouth rinse	
Fluoridated water: Program serves schools in fluoridated towns 4 Health Education: Individual instruction on brushing 14 Individual instruction on flossing 14 Individual instruction on regular dental 13 visits Individual instruction on limiting sweets 13 Individual instruction on avoiding alcohol 4 and tobacco Group instruction on brushing 14 Group instruction on flossing 13 Group instruction on regular dental visits 14 Group instruction on limiting sweets 14 Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children 12 to see local provider Program provides financial support 7 for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time		Varnish	
Health Education: Individual instruction on brushing Individual instruction on flossing Individual instruction on flossing Individual instruction on regular dental visits Individual instruction on limiting sweets Individual instruction on avoiding alcohol and tobacco Group instruction on flossing Group instruction on flossing Individual instruction on brushing Group instruction on pregular dental visits Group instruction on regular dental visits Group instruction on limiting sweets Individual instruction on regular dental visits Group instruction on regular dental visits Individual instruction on regular dental visits Individual instruction on flossing Individual instruction on avoiding alcohol Individu		Toothpaste	12
Health Education: Individual instruction on brushing Individual instruction on flossing Individual instruction on regular dental visits Individual instruction on limiting sweets Individual instruction on limiting sweets Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on flossing Individual instruction on flossing Individual instruction on brushing Individual instruction on brushing Individual instruction on avoiding alcohol Individual instruction on brushing Individual instruction on limiting sweets Individual inst	Fluoridated water:		
Individual instruction on brushing Individual instruction on flossing Individual instruction on regular dental visits Individual instruction on limiting sweets Individual instruction on limiting sweets Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on flossing Individual instruction on avoiding alcohol Individual instruction on avoiding alcohol Individual instruction on avoiding alcohol Individual instruction on brushing Individual instruction on avoiding alcohol Individual instru		Program serves schools in fluoridated towns	4
Individual instruction on flossing 14 Individual instruction on regular dental visits Individual instruction on limiting sweets 13 Individual instruction on avoiding alcohol 4 and tobacco Group instruction on brushing 14 Group instruction on flossing 13 Group instruction on regular dental visits 14 Group instruction on limiting sweets 14 Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children 12 to see local provider Program provides financial support 7 for children to see local providers Program Oversight: Local dentist works in school with 4 hygienist at least part of time	Health Education:		
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Individual instruction on regular dental visits Individual instruction on limiting sweets Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on flossing Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on regular dental visits Group instruction on limiting sweets Individual instruction on brushing Individual instruction on avoiding alcohol Individ		_	
Individual instruction on limiting sweets Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on flossing I3 Group instruction on regular dental visits Group instruction on limiting sweets I4 Group instruction on limiting sweets I4 Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children to see local provider Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time		Individual instruction on regular dental	
Individual instruction on avoiding alcohol and tobacco Group instruction on brushing Group instruction on flossing Group instruction on regular dental visits Group instruction on limiting sweets I4 Group instruction on limiting sweets Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children to see local provider Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time			13
Group instruction on flossing Group instruction on regular dental visits Group instruction on limiting sweets Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children to see local provider Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time		Individual instruction on avoiding alcohol	
Group instruction on flossing Group instruction on regular dental visits Group instruction on limiting sweets Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children to see local provider Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time		Group instruction on brushing	14
Group instruction on regular dental visits Group instruction on limiting sweets Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children to see local provider Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time			
Group instruction on limiting sweets Group instruction on avoiding alcohol and tobacco Referrals: Program arranges for children to see local provider Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time		· ·	
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Program arranges for children to see local provider Program provides financial support 7 for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time			6
to see local provider Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time 4	Referrals:		
Program provides financial support for children to see local providers Program Oversight: Local dentist works in school with hygienist at least part of time			12
Local dentist works in school with hygienist at least part of time		Program provides financial support	7
Local dentist works in school with hygienist at least part of time	Program Oversight	:	
hygienist at least part of time			4
		hygienist at least part of time	
			8

Comment: There is some variation in the services provided by school-based dental programs in New Hampshire. Decisions on what services to provide are usually made at the local level. Most efforts focus on prevention, as opposed to restorative treatment.

Method: Data were collected through a survey of all school-based programs in the state in 2002.

Healthy People 2010: Objective #21-12 is to increase the proportion of low-income children and adolescents who received any preventive dental service during the past year and objective #21-13 is to increase the proportion of school-based health centers with an oral health component. Objective (#21-8a) is to increase the proportion of children aged 8 years who have received dental sealants on their molar teeth to 50%.

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to increase the proportion of children in third grade who have received dental sealants on their permanent molar teeth. The specific target has not yet been established. In 2001 46% of children in third grade in New Hampshire had dental sealants.

Data Source: New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program.

THIRD GRADE ORAL HEALTH SURVEY

Table 16. Percent of 3^{rd} graders with untreated decay, caries experience, and sealants – New Hampshire, 2001

	Percentage	95% Confidence Interval
Untreated decay	21.7	14.3-29.1
Caries experience	52.0	45.5-58.4
Sealants on permanent molars	45.9	37.7-54.0
Treatment urgency		
No obvious problem	69.8	62.7-76.8
Early dental care	25.1	19.1-31.2
Urgent care	5.1	3.0-7.3

Comment: Results from the 2001 New Hampshire oral health survey are similar to those collected by a survey in Maine in 1999.

Method: The survey was conducted from February-April, 2001. The survey design was adapted from the *Basic Screening Surveys* developed by the Association of State and Territorial Dental Directors.

Healthy People 2010: The *Healthy People 2010* objectives are to reduce the proportion of 6 to 8 year old children with dental caries experience to 42% (#21-1b), to reduce the proportion of 6 to 8 year old children with untreated dental decay to 21% (#21-2b), and to increase the proportion of children aged 8 years who have received dental sealants on their permanent molar teeth to 50% (#21-8a).

Healthy New Hampshire 2010: The *Healthy New Hampshire 2010* objective is to increase the proportion of children in third grade who have received dental sealants on their permanent molar teeth. The specific target has not yet been established. In 2001 46% of children in third grade in New Hampshire had dental sealants.

Data Source: New Hampshire Department of Health and Human Services, Office of Community and Public Health, Division of Family and Community Health, Bureau of Rural Health and Primary Care, Oral Health Program.

Figure 1. New Cases of Oral Cancer by Sex – New Hampshire, 1999

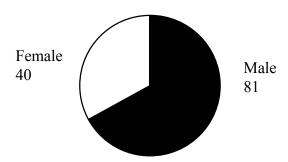


Table 17. Incidence by sex – New Hampshire, 1995-1999 and United States, 1997

Age-adjusted Incidence Rates (per 100,000 persons)			
	New Hampshire, 1995-1999	United States, 1997*	
All	10.9	11.0	
Male	16.1	16.3	
Female	6.6	6.7	

^{*} United States data for 1997 is from the Surveillance, Epidemiology and End Results (SEER) program of the National Cancer Institute. Data are from selected areas of the United States representing approximately 14% of the country's population. When making comparisons with New Hampshire, only data for whites from SEER were used.

Comment: Oral cancer consists of cancer of the lips, salivary glands, mouth, and throat. Approximately 75% of oral cancer is attributable to tobacco and alcohol use. Efforts to decrease oral cancer are dependent on control of these two risk factors along with early detection.

Method: Data are from the state cancer registry.

Healthy People 2010: Objective #3-6 is to reduce the oropharyngeal death rate to 2.7 per 100,000 population.

Healthy New Hampshire 2010: No objective.

Figure 2. Mortality from oral cancer by sex – New Hampshire, 1999

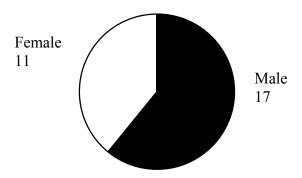


Table 18. Mortality rate from oral cancer by sex – New Hampshire, 1995-1999 and United States, 1997

Age-adjusted mortality rate (per 100,000 persons)			
	New Hampshire, United States, 1995-1999 1997 White		
All	3.7	2.8	
Male	5.5	4.2	
Female	2.3	1.7	

Comment: Oral cancer consists of cancer of the lips, salivary glands, mouth, and throat. Approximately 75% of oral cancer is attributable to tobacco and alcohol use. Efforts to decrease oral cancer are dependent on control of these two risk factors along with early detection.

Method: Data are from death certificates. To provide a more meaningful comparison with New Hampshire, the mortality rate for the United States is restricted to whites.

Healthy People 2010: The *Healthy People 2010* objective (#3-6) is to reduce the oropharyngeal cancer death rate to 2.7 per 100,000 (age-adjusted to the 2000 population).

Healthy New Hampshire 2010: No objective.

YOUTH TOBACCO SURVEY

Table 19. Middle and high school students who reported that a dentist or someone in a dentist's office talked to them about the danger of tobacco use during the past 12 months – New Hampshire, 2001

	Percent	95% Confidence Interval
Middle School Students –	Grades 6-8	
Counseled	13.6	11.9-15.3
Not counseled	75.3	72.4-78.2
Did not visit dentist	11.1	9.2-13.0
High School Students – Gr	radas 0 12	
riigii School Students – Ol	aues 9-12	
Counseled	11.8	9.9-13.7
Not Counseled	79.6	76.8-82.4
Did not visit dentist	8.6	6.5-10.7

Comment: Tobacco is the leading cause of preventable mortality and a major determinant of oral health. Dentists and dental hygienists should routinely counsel their patients, especially adolescents, about the dangers of tobacco use.

Sixth graders were more likely to have been counseled (17.2%) about the danger of tobacco use than were 12th graders (9.4%). There were no other significant differences in having been counseled by either gender or grade level. There was no significant differences between 7th and 8th graders surveyed in 2001 and those surveyed in 2000. The first New Hampshire Youth Tobacco Survey was conducted in 2000 among 7th and 8th grade students.

Approximately 10% of students in grades 6-12 did not see a dentist in the past year.

Method: Data are based on self-reports of a sample of students in public schools in New Hampshire.

Healthy People 2010: Objective #27-2a is to reduce tobacco use by adolescents to 21%. Objective #1-3 is to increase the proportion of people appropriately counseled about health behaviors.

Healthy New Hampshire 2010: Reduce the percentage of high school students who report current tobacco use to 24%. Increase the percentage of high school students who report never using tobacco to 43%.

Data Source: New Hampshire Department of Health and Human Services, Office of Public and Community Health, Division of Chronic Disease Prevention, Tobacco Prevention and Control Program.

NATIONAL ORAL HEALTH SURVEILLANCE SYSTEM

Indicator	New Hampshire	Healthy New Hampshire 2010	United States	Healthy People 2010
Annual dental visit in persons ≥18 years	76% (2001)		68% (1999)	
Annual teeth cleaning in persons ≥18 years	78% (2001)		69% (1999)	
Complete tooth loss in persons ≥65 years	23% (2001)		24% (1999)	20% among 65-74 year olds
Oral cancer deaths per 100,000 persons	3.7 (1995-99)		2.8 (1999)	2.7
Untreated caries in children 6-8 years	22% (2001)			21%
History of decay in children 6-8 years	52% (2001)			42%
Sealants in children 8 years	46% (2001)	Under development		50%
Fluoridation of public water supplies	43% (2001)	65%	66% (2000)	75%

Comment: For the eight indicators in the National Oral Health Surveillance System, New Hampshire is doing reasonably well for five measures: annual dental visits among adults, annual teeth cleaning among adults, complete tooth loss among the elderly, untreated decay among children 6-8 years of age, and sealants in children 8 years of age. Additional progress is needed to reach *Healthy People 2010* objectives for oral cancer deaths, history of decay in children 6-8 years of age, and fluoridation of public water supplies.

CONCLUSIONS

The data in this report indicate that oral health problems, such as dental caries in children and tooth loss in adults, are still common in New Hampshire. Effective preventive measures such as water fluoridation and dental sealants are under-utilized. The data also show marked disparities in oral health by socioeconomic status. Individuals who have lower incomes or less education are substantially more likely to be unable to access care and to have dental problems. Additional progress needs to be made if New Hampshire is to achieve the state and national oral health objectives established for the year 2010.

CONTRIBUTORS

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